

**CLAIMS :**

- 730 1. A composition comprising 5-methoxytryptamine or its pharmaceutically acceptable salt and a carrier, excipient or additive; said 5-methoxytryptamine present in an amount effective to prevent mammalian tissue damage.
2. The composition as claimed in claim 1 is a form selected from the group  
735 consisting of a tablet, capsule, powder, lozenge, solution, syrup, aqueous or oily suspension, elixir, implant, and aqueous or non-aqueous injection.
3. The composition as claimed in claim 1 wherein the amount of 5-methoxy  
740 tryptamine or its salt is from 5 to 500 mg.
4. A composition comprising 5-methoxytryptamine or its pharmaceutically acceptable salt and a carrier, excipient or additive; said 5-methoxy tryptamine present in an amount effective to treat mammalian tissue damage.  
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5. The composition as claimed in claim 4 is a form selected from the group consisting of a tablet, capsule, powder, lozenge, solution, syrup, aqueous or oily suspension, elixir, implant, and aqueous or non-aqueous injection.
- 750 6. The composition as claimed in claim 4 wherein the amount of 5-methoxy tryptamine or its salt is from 5 to 500 mg.
7. A composition comprising 5-methoxytryptamine or its pharmaceutically acceptable salt and a carrier, excipient or additive.  
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8. The composition as claimed in claim 7 is a form selected from the group consisting of a tablet, capsule, powder, lozenge, solution, syrup, aqueous or oily suspension, elixir, implant, and aqueous or non-aqueous injection.

- 760 9. The composition as claimed in claim 7 wherein the amount of 5-Methoxy  
tryptamine or its salt is ranges from 5 to 500 mg.
10. A method for preventing tissue damage caused by exposure to an oxygen reactive  
species, comprising administering an amount of 5-Methoxytryptamine or a salt  
765 thereof effective to prevent tissue damage to a patient in need thereof.
11. The method of claim 10, where the tissue is myocardium.
12. The method of claim 10 wherein the amount of 5-methoxytryptamine or its salt is  
770 0.7 to 7.0 mg/kg body weight.
13. A method for treating tissue damage caused by exposure to an oxygen reactive  
species, comprising administering an amount of 5- Methoxytryptamine or a salt  
thereof effective to prevent tissue damage to a patient in need thereof.  
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14. The method of claim 13, where the tissue is myocardium.
15. The method of claim 13, wherein the amount of 5-Methoxytryptamine or its salt is  
0.7 to 7.0 mg/kg body weight.  
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16. A method for treating cardiac toxicity, myocardial ischemia, myocardial infarction  
or heart failure comprising administering an effective amount of 5-Methoxy  
tryptamine or a salt thereof to a patient in need thereof.
- 785 17. The method according to claim 16 wherein, the cardiac toxicity is induced by an  
anthracycline antineoplastic.
18. The method of claim 16, wherein the amount of 5-Methoxytryptamine or its salt is  
0.7 to 7.0 mg/kg body weight.  
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19. A method for increasing the activity of superoxide dismutase enzyme in a tissue  
of a patient comprising administering to the patient an amount of 5-Methoxy

tryptamine or a salt thereof effective to increase the activity of superoxide dismutase enzyme.

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20. The method of claim 19, wherein the tissue is myocardium.

21. A method for treating cardiac toxicity, myocardial ischemia, myocardial infarction or heart failure comprising administration of an amount of 5-Methoxy tryptamine or a salt thereof effective to increase the activity of superoxide dismutase enzyme to a patient in need of such treatment.

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22. A method for inhibiting lipid peroxidation in a tissue of a patient comprising administering to the patient an amount of 5-Methoxytryptamine or a salt thereof effective to inhibit the lipid peroxidation.

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23. The method of claim 22, wherein the tissue is myocardium.

24. A method for treating cardiac toxicity, myocardial ischemia, myocardial infarction or heart failure comprising administration of an amount of 5-Methoxy tryptamine or a salt thereof effective to inhibit lipid peroxidation to a patient in need of such treatment .

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25. A method for reducing levels of creatine kinase-MB in a tissue of a patient comprising administering to the patient an amount of 5-Methoxytryptamine or a salt thereof effective to reduce the level of creatine kinase-MB.

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26. The method of claim 25, wherein the tissue is myocardium.

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27. A method for reducing levels of lactate dehydrogenase in a tissue of a patient comprising administering to the patient an amount of 5-Methoxy tryptamine or a salt thereof effective to reduce the level of lactate dehydrogenase.

28. The method according to claim 10 wherein the tissue is liver, kidney, intestine, pancreas or brain.

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29. The method according to claim 13 wherein the tissue is liver, kidney, intestine, pancreas or brain.
30. The method according to claim 19 wherein the tissue is liver, kidney, intestine, pancreas or brain.
- 830 31. The method according to claim 22 wherein the tissue is liver, kidney, intestine, pancreas or brain.
32. The method according to claim 27 wherein the tissue is myocardium, liver, kidney, intestine, pancreas or brain.